

REMARKS

Claim 1 is amended to incorporate the substance of Claim 2 and to clarify novelty over the applied art. Claim 4, indicated as allowable in substance, is rewritten in independent form. Claim 6 is amended to provide clear antecedent basis for a term in the claim. Claims 12-14 are amended to define over the applied art. Claims 1-14 remain, with Claims 4-11 allowed or indicated as allowable.

Claims 6-11 are objected to because "the electrical ground connection" in Claim 6, line 13 lacks antecedent basis. That term is changed to --the electrical ground path--, a term having antecedent basis in Claim 6.

Claims 1-3 and 12-14 were rejected as anticipated by *Zini* (6,307,149). The Applicant respectfully traverses this rejection for the following reasons, as regards the amended claims.

Zini discloses a lighting protection system including a static dissipater unit 10 comprising an electrically conductive base 15 with a multitude of fine wires emanating from the upper end of that base. The bottom end 35 of the base is physically and electrically connected to another element (column 5, lines 3-6), e.g., a grounding line 615.

The rejection of Claim 1 asserts that the *Zini* apparatus establishes an electrical ground path with fluid, namely, air located inside the conductive base member 15 of that reference. The Applicant respectfully questions that assertion. Although *Zini's* base member 15 does indeed contain air over part of its length, the base member itself is made of electrically-conductive material (column 4, lines 17 and 18, and 38-42). The metallic

base member 15 thus would be a far better (that is, lower resistance) conductor of static electricity than the air within the hollow base member.

In any case, Claim 1 now recites apparatus comprising an electrically nonconductive pipe having an interior region adapted for connection in fluid flow relation to a plumbing system. The electrically conductive element is disposed at the interior region of the pipe, for exposure to fluid within the pipe.

It will be evident that *Zini* fails to anticipate apparatus for establishing an electrical ground connection and comprising the elements recited in Claim 1. To begin with, *Zini* requires an electrically conductive base member, necessary to conduct static electricity from the wires 25 to electrical ground through connection at the lower end 35 of the base member. (The rejection of Claim 13 refers to an electrically nonconductive pipe element 705, supposedly mentioned at column 6, line 9 of *Zini*. However, element 705 is merely a tower or pole that supports at least one static dissipation unit at its top. A ground wire 715 extends through that pole from the static dissipation unit to the grounding rod near the base of the pole. In another words, the pole 705, although electrically nonconductive by itself, merely provides an elevated support for the static dissipation unit which, as *Zini* previously describes, includes an electrically conductive base member 15 supporting the static discharge wires 25 and connecting those wires to the ground line 715 extending through the pole.)

Zini thus lacks an electrically nonconductive pipe, and also lacks that pipe adapted for fluid-flow connection with a plumbing system. Accordingly, *Zini* fails to anticipate apparatus combination as recited in Claim 1, and the apparatus defined by that claim is novel over *Zini*.

Claim 3 depends from Claim 1 and recites that the conductive element is spaced apart from an inner wall defining the interior region of the pipe. The rejection asserts that conductive element 720 (Figure 7 of *Zini*) is based apart from an inner wall defining the interior region of the pipe. However, as pointed out above, *Zini's* "pipe 705" is merely a pole or tower supporting his actual lightning protection system 710, which includes an electrically-conductive base member 15 with individual wires extending outwardly from an end thereof. For this additional reason, *Zini* fails to anticipate the apparatus defined by Claim 3.

Claim 12 is amended to point out that the present apparatus is intended for establishing an electrical ground connection through a pipe system that may include at least one electrically nonconductive element. That apparatus includes an electrically nonconductive pipe element operative for accommodating fluid flow through a pipe system in which the pipe element is placed. *Zini* fails to disclose an electrically nonconductive pipe element with an electrically conductive element disposed within that pipe element. First of all, the base member 15 of *Zini* is disclosed as conductive, as is necessary for conducting static electricity from the wires 25 to a suitable ground connection at the lower end 35 of the base member. Furthermore, *Zini* does not disclose or intend that his static dissipater unit 10 could be placed in a pipe system for accommodating fluid flow. Nonetheless, even if *Zini* somehow were placed in a fluid-flow system, *Zini's* base member 15 made of conductive metal would obviate any need or purpose for a separate electrically conductive element disposed within that base member because the electrically-conductive base member itself would provide a good electrical

connection with fluid within that base member. For these additions reasons, *Zini* fails to anticipate an apparatus as defined in Claim 12.

Claim 13 now defines a method for establishing an electrical ground connection through a pipe system for accommodating electrically conductive fluid. This method comprises disposing an electrical conductor within an electrically nonconductive pipe element adapted for connection in fluid flow operation in the pipe system, and providing a conductive path that extends from the electrical conductor within the pipe element to a connection point outside the pipe element. *Zini* fails to anticipate a method as defined in Claim 13. That reference does not dispose an electrical conductor within an electrically nonconductive pipe element (as mentioned above, element 705 of *Zini* is merely a pole that supports his dissipater unit 710). Furthermore, neither that pole nor the dissipater 710 itself is in anyway adapted for connection in fluid flow operation in a pipe system. Accordingly, Claim 13 defines a novel method over *Zini*.

Dependent method Claim 14 adds the further step of installing an apparatus prepared according to Claim 13, into a fluid-flow piping system having at least one electrically non-conductive component, and attaching the connection point of the apparatus to an electrical ground. *Zini* does not disclose any structure or method concerned with a fluid-flow piping system, let alone such a system having at least one electrically non-conductive component. Accordingly, *Zini* fails to anticipate the method of Claim 14, namely, installing into a fluid-flow piping system and apparatus prepared according to Claim 13.

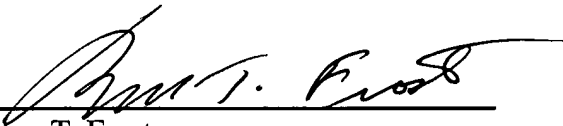
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The foregoing is submitted as a complete response to the Office Action identified above. The Applicant submits that the application is in condition for allowance and solicits a notice to that effect.

Respectfully submitted,

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